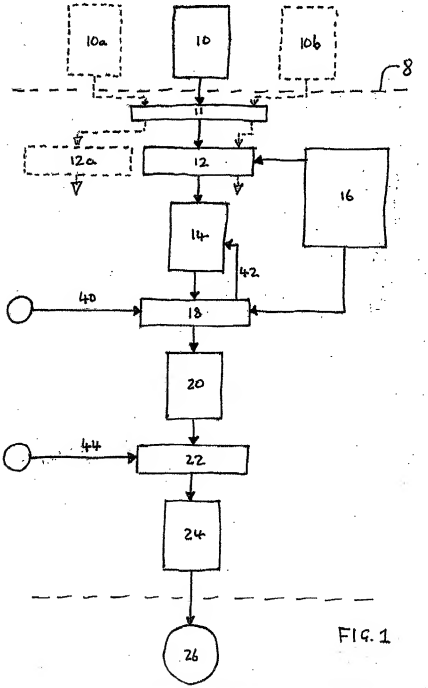

FIG. 1

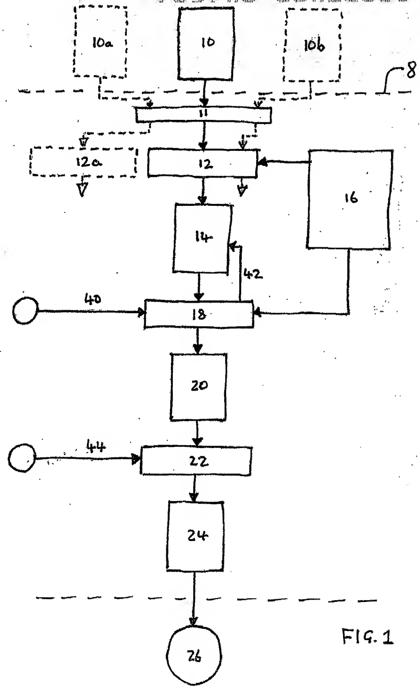

FIG. 1

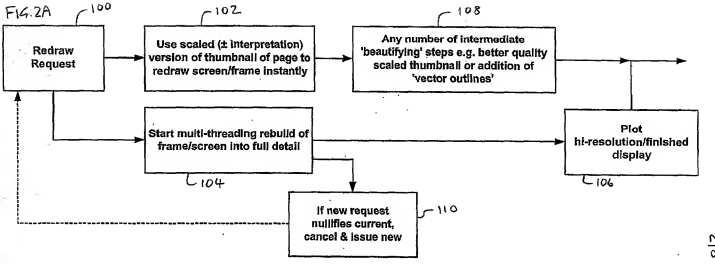
FIG. 2A
100
Redraw Request
102
Use scaled (± interpretation) version of thumbnail of page to redraw screen/frame instantly
108
Any number of intermediate 'beautifying' steps e.g. better quality scaled thumbnail or addition of 'vector outlines'
Start multi-threading rebuild of frame/screen into full detail
104
Plot hi-resolution/finished display
106
If new request nullifies current, cancel & issue new
110
FIG. 2B
OR
112
Redraw Request
114
Scaled thumbnail
116
Full frame detail redraw
118
hi-resolution display
Respond to further request until <n> idle time (i.e.defer redraw)
Immediate cancellation during further request

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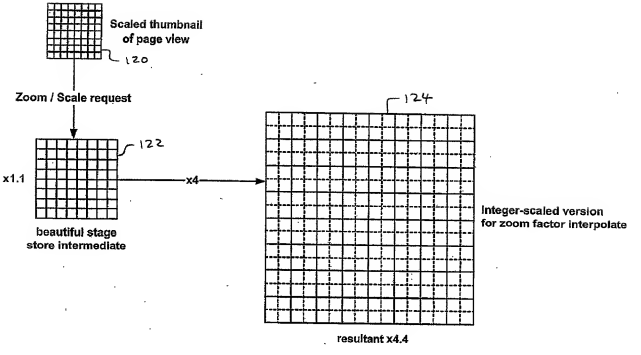
FIG. 3



Versus

- Intermediate stage 'infrequent' & therefore can use beautiful/detailed scaling, versus rapid/cruder final or single stage scale.

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Fig. 4A

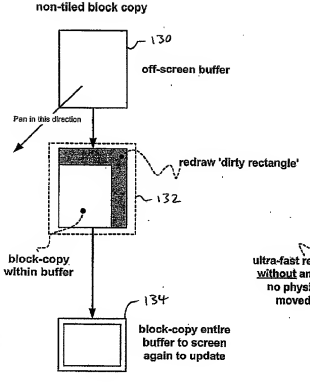
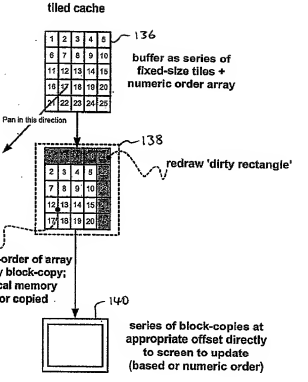

non-tiled block copy
130
off-screen buffer
Pan in this direction
redraw 'dirty rectangle'
132
block-copy
within buffer
134
block-copy entire
buffer to screen
again to update

Fig. 4B


tiled cache
136
buffer as series of
fixed-size tiles +
numeric order array
Pan in this direction
138
redraw 'dirty rectangle'
ultra-fast re-order of array
without any block-copy;
no physical memory
moved or copied
140
series of block-copies at
appropriate offset directly
to screen to update
(based or numeric order)

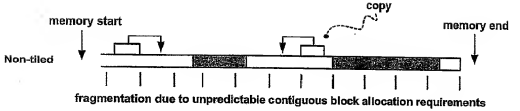


Fig. 5A

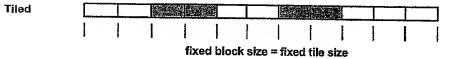
fragmentation due to unpredictable contiguous block allocation requirements

MMU block mis-matched, poorer re-allocation & cache consistency

= unused (released) blocks

= large numbers of physical memory copy operations

= physical memory MMU



fixed block size = fixed tile size

Fig. 5B

unlimited amount of fragmentation has no effect on usability
no copy operations required (for buffer re-centering Fig.24)
potential perfect synchronisation with MMU predictability
& extendibility of pool (!)

FIG. 5C

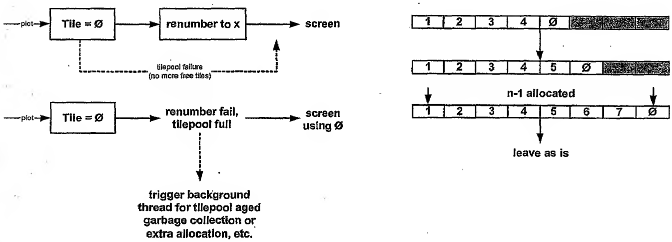


FIG. 6

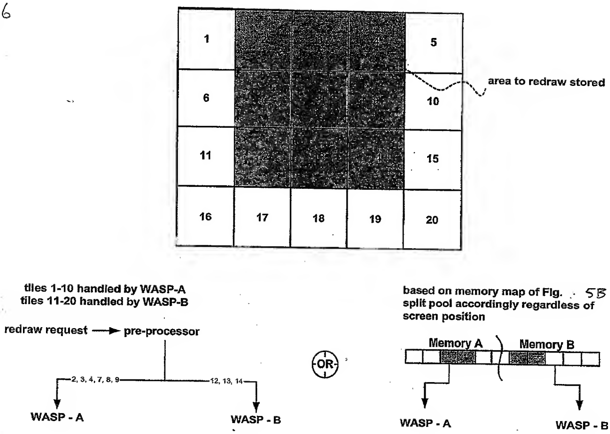
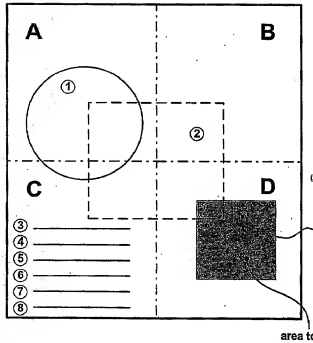


Fig. 7



4 Zones | A, B, C, D

8 Objects | ① - ⑧

By Zone: A = ①, ②
B = ②
C = ①, ②, ③ ... ⑧
D = ②

Fig. 8